

CLAIMS

1/ A demand regulator comprising:

- communication means for putting a pressurized breathing gas admission (12) into communication with a tube (14) for connection to the inside of a breathing mask;
- means (34, 32) for supplying dilution air to the breathing gas;
- a breathe-out valve (36) opening from the tube to the atmosphere;
- a manual control member (38) having a normal position causing operation without over pressure above atmosphere and with dilution, and an emergency position causing the tube to be fed with pure breathing gas at an over pressure; and
- means for preventing operation with high pressure gas feed so long as the mask is in storage.

2/ A regulator according to claim 1, characterized in that the regulator is mounted on a mask and in that said means for preventing operation with high pressure gas feed to the tube are constituted by a valve (44) responsive to the mask being put into place on the face or to the pressure of the mask being applied against the face.

3/ A regulator according to claim 1, characterized in that the communication means comprise a main valve (16) defining a control chamber (18) connected via a constriction (20) to the admission and controlling communication between the admission (12) and the tube (14), and a pilot valve (22) responsive to breathe-in suction in the tube and co-operating with a fixed seat to put the control chamber (18) into communication with a chamber (28) which communicates with the admission via a constriction (29).

4/ A regulator according to claims 2 and 3, characterized in that said valve (44) is placed between the chamber (28) and the surrounding atmosphere.

5 5/ A regulator according to claim 3, characterized in that said means for preventing operation are designed to cause high pressure operation when the selector member 38 is in its "emergency" position in response to a first intake of
10 breath causing the pressure in the tube to drop below ambient pressure.

6/ A regulator according to claim 3, characterized in that said means for preventing operation are designed to cause the regulator to be fed in response to inflation of a
15 pneumatic harness of a mask carrying the regulator.

7/ A regulator according to claim 5, characterized in that said means for preventing operation comprise: a valve (62) controlled by a differential piston (64) urged towards a
20 position in which the valve (62) cuts off the feed; and a harness inflation and deflation cock having a rest position in which it connects an annular surface (68) of the piston to the atmosphere and an activated position in which it connects said annular surface to the admission, the piston
25 having a large face subjected to atmospheric pressure and a small face subjected to the pressure downstream from the valve (62) which acts in the opening direction.

8/ A regulator according to any preceding claim,
30 characterized in that the means for preventing operation are carried by a storage box for a mask carrying the regulator and are designed to bring and/or retain the selection member (38) into or in the "normal" position so long as the mask is in storage and to cause it to move into the "emergency"
35 position when the mask is extracted.

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